

REMARKS

Reconsideration and withdrawal of the rejections of the claimed invention is respectfully requested in view of the amendments, remarks and enclosures herewith, which place the application in condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

Claims 1-6, 15, 16 and 18-21 are pending in this application. The specification has been amended to correct a typographical error with regard to the amount of dimethylether which was cited to be 1.5 kg in Table 1, but was erroneously listed as 2 kg in the original paragraph. The applicants also note that 1.5 kg of diluent gas corresponds to 0.25 parts by weight of diluent gas for 1 part by weight cellulose (6 kg). No new matter has been added by this amendment.

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. The amendments of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§§§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. THE 35 U.S.C. 112, FIRST PARAGRAPH REJECTIONS HAVE BEEN OVERCOME

Claims 1-6, 15, 16 and 18-20 were rejected as allegedly failing to comply with the written description requirement by allegedly failing to show possession of the claimed invention. The basis for this rejection is that the current claim uses the transition phrase "consists of" (see line 3 of claim 1 above) whereas the previous version of claim had used the transitional phrase "comprises" and pertains to the addition of water for Example 1 and distribution using a sieve. However, this rejection is misplaced for several reasons.

First, just as a prior art reference can be relied upon for all that it teaches, so can the applicants' specification can be relied upon for all that it teaches and is not limited to the Examples for making a showing of possession of the invention.

Second, the addition of water is encompassed by the filtering step and as such possession of the invention is shown for this element of the invention.

Third, the distribution using a sieve is not a required element for achieving the cellulose ethers of the invention (now as amended having a particle size distribution of more than 99% of less than 100 mesh in size); it merely is a post-production step which places the cellulose ethers in condition for downstream uses, i.e. removing the less than 1% content of particles with sizes of 100 mesh or greater.¹ However, prior to any sieving step, the dried product already has the claimed particle size distribution claimed.

III. THE 35 U.S.C. 103(a) REJECTION HAS BEEN OVERCOME

Claims 1-6, 15, 16 and 18-21 were rejected as allegedly being obvious by Haidasch et al. (US 3,251,825 -“Haidasch”) in view of Onda et al. (US 4,091,205 - “Onda”), Hitchin et al. (GB 909,039 -“Hitchin”), Anderson et al. (US 2,647,064 - “Anderson”) and Schminke et al. (US 3,903,075 -“Schminke”). The applicants request reconsideration of this rejection in light of the applicants’ previous response and for the following reasons below.

The claims as amended include the element that the amount of diluent gas used in the claimed method is 0.25 or less parts by weight for 1 part by weight of cellulose.

The unexpectedly remarkable effect of the present invention is well described in the Table 1, wherein the particle size distribution of cellulose ether under 100 mesh is over 99 % when the amount of dimethylether (diluent gas) is used by 0 (0 part) to 1.5 kg (0.25 part), whereas the particle size distribution of cellulose ether under 100 mesh is only 45.5 % when the amount of dimethylether is used by 3.0 kg (0.5 part).

Examples 1-7, which are representative of the claimed invention, showed over two fold increase in the amount of cellulose ether under 100 mesh relative to the Comparative Example.

A position previously taken in an Office Action was that it would have been obvious to have simply rearranged the process step, e.g. grinding or pulverizing the starting material at the beginning of the process to achieve the final product of the applicants claims. However, this is not true for the present invention.

A feature of the present invention is that it minimizes the amount of diluent gas to prevent agglomeration of the cellulose ether into a flock. If the diluent gas is used over 0.25

¹ Adding a sieving step would be non-sensical as it part of the advantage of the invention is that no grinding step is needed and that the particle size distribution is achieved without a sieving step (e.g. a mixture of a cellulose ethers

parts by weight for 1 part by weight of cellulose, the cellulose ethers are easy to swell and thus they agglomerate with each other which is representative of the conventional techniques in the art; thus, an additional grinding step is required in order to achieve lower mesh sizes.

However, the present invention has solved this problem and thereby reduced remarkably the cost for preparing powdered cellulose ethers by eliminating the need for a grinding step.

With regard to the use of Hitchin, the step and amount the diluent gas used are totally different from the presently claimed invention as Hitchin merely refers the use of a diluent in the methylation of alkali cellulose with methyl chloride and the amount of dimethyl ether is 600 lb for 320 lb of dry cellulose which is well in excess of the ratio presently claimed (approximately 7.5 : 1).

With regard to Schminke, the Examiner's supposition that the reference to "in a finely divided form" in col. 3, lines 33-39 somehow teaches the characteristics of the cellulose ethers formed by the applicants' claimed process is incorrect; the cited reference never teaches nor suggests the process of the present invention for obtaining cellulose ethers having particle size distribution of more than 99% of less than 100 mesh in size *without grinding after drying*. In fact, Schminke discloses that the product dispersed in water "in a finely divided form" after washing with cold and hot water was dried and *crushed and then pulverized after drying* as seen in col. 3, lines 43-49.

Therefore, the combination of Haidasch, Onda, Hitchin, Anderson and Schminke do not render the applicants' claimed invention to be obvious for the previous reasons cited and also because the combination of references do not teach or suggest the unexpected results which can be attributed to the elements of the applicants' claimed process, namely the ratio of diluent gas used results in a cellulose ethers with particle size distribution of more than 99% of less than 100 mesh in size without a grinding step.

with a particle size distribution of 50% greater or equal to 100 mesh and 50% less than 100 mesh could theoretically be made into a 100% of less than 100 mesh by subjecting the mixture to sieving with a 100 mesh sieve.)

CONCLUSION

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date, and, the Examiner is invited to telephonically contact the undersigned to advance prosecution.

Respectfully submitted,
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